



Fermilab

**BEAMS DIVISION/CRYOGENIC DEPT
ENGINEERING and DESIGN GROUP**

Notes in Feb 11, 2002 Meeting for Linac Cryogenics

Attendees: Luebke, Kaplan, Darve, Norris, Pei, Martinez, and Ed Black via telephone

The following is a general outline of the items discussed at yesterday's meeting.

We began the meeting with a question on Japanese convective system : What is reality of future Japanese tests at Fermi?

Answers per Kaplan and Black: it's a "horse race" to see who is going to be first to test..the convective method reduces the volume to 6 liters of hydrogen...test in Japan is done in vertical dewar...how will it mount in Linac area...japanese absorber just needs helium...we have to supply only. Barry discussed with Black and Kaplan the need to look at Safety implications and the need to be able to adapt to the Fermi system.

It seems that Ishimoto at KEK is the man to discuss details of this with.....

Dan talking about ultimate heat load capability of the convective heat exchange method.

If this device must reside inside the Lab G solenoid, then a cryostat will have to be built special for this. Fermi or KEK to do this?

Details of Japanese thoughts can be found on websiteIIT - Mucool website

Dan comments that the RF cavity needs to possibly be inside of Solenoid....absorber could possibly be pulled out after starting in the middle... wants to test absorber at the zero field and high field points

Beryllium window being thought about for use on vacuum cryostat ...**wants window to window distance on the order of 2-3 cm (absorber to vacuum)**... we must modify the cross sectional drawing and make it off-center...this changes the absorber cryostat design...Kaplan discusses that the beam will grow after leaving absorber. Barry asked what the ratio of blowup would be? Dan was unsure. We must determine this.

Dan and Christine discussing the windows ...materials being considered. Dan mentioned Bill Luebke is looking into the technical feasibility of machining Beryllium.

There is a question about the restriction that may be designed into the cryostat when you ruptureCryogenics must look at annulus of vacuum space for relieving the hydrogen. We must realized we are allowed to pressurize the vacuum up to 15 psig, however. Initial calculations suggested area is equivalent to a 8 inch pipe.

Note: Next meeting is at 3:30, Monday the 18th at Mw9.